



BLACK ROCK - SCORPION (BUTHUS AFER)  
(found at Khandala, Western Ghauts).  
Exemplifying simultaneous twin - parturition.

Photo-Collotype, Survey of India Offices, Calcutta, February 1888.

to stop and look round, and saw a yellow animal bounding away through some very thin jungle about 400 yards away. I at first thought it was a deer; and I even put my rifle up in a careless sort of way, then I saw a long tail, and my thoughts ran to a neelghai; the two natives also saw it. We went on, I being rather puzzled at the action and the tail of the beast. Presently, my *chokra* came up (who had been following me at about 200 yards) in an excited state, and said that as he was following me through this bit of grass, about twenty yards from the track, he saw a tiger crouching facing the path. He, naturally, being a servant and not a shikar, shouted out "Bagh," and the tiger went off into the jungle, and this was the beast we saw, and the others, who were behind, saw it as well. The inexplicable part of the business was that neither I, nor the two natives, who were both shikaris, and had seen lots of tigers, identified it as a tiger when we saw it. The only explanation I can offer is that a tiger was the last thing we expected to see, and we had been seeing on the way lots of deer of sorts.

#### SIMULTANEOUS TWIN PARTURITION OF *BUTHUS AFER*, THE BLACK ROCK SCORPION.

An illustration will be found facing page 69 of this number of the Journal, which has been reproduced from a photograph taken by Mr. F. J. Kingsley. It consists of a common Black Rock Scorpion (*Buthus afer*) preserved by the Rev. Fr. Dreckmann, S. J., in the act of giving birth to two young ones simultaneously.

The Rev. Fr. Dreckmann writes as follows regarding this unique specimen:—

"It was caught with many others in Kbandalla, during May, 1886, and was afterwards brought down to Bombay. They did not, however, survive their capture very long, but in a few months all succumbed to voluntary starvation. They were tempted with different kinds of food, but all to no avail, only now and then they would feast upon one of their number, and when the young ones appeared they were most greedily devoured by their elders. About the middle of June the young ones began to make their appearance. As soon as they were born they climbed upon the backs of their mothers, probably to be out of reach of her jaws, and it was noticed *that the increase of the family was always by pairs*. A closer examination settled beyond doubt two points: 1st, that at least this kind of scorpion is strictly viviparous, not ovo-viviparous, as stated by Duncan ("Transformation of Insects") and others; and, 2nd, that the birth of the pair *takes place simultaneously*, though very often one of the twins would be somewhat in advance of the other. The specimen presented to the Society was placed in alcohol and killed during the process of parturition, so as to be in evidence about the two points in question.

"Last May we were unfortunate, as all our scorpions died before any young ones were born; this year, however, Rev. Father Meyer, whose special pets they are, intends to take great care of them, and hopes to rear a sufficient number to be able to study their life-history, about which very little appears to be known.

"I have seen it stated that scorpions are such savage creatures that they are bound to lead a strictly solitary life, as the stronger one of two scorpions would invariably kill and eat the weaker one. This is a calumny, I think, as we have often found as many as 16 (two old ones and fourteen half-grown) under one stone, and as 14 was also the greatest number of young ones born by any one female in captivity, the presumption is that those 16 represented an undivided family."

Many writers on the subject refer to the double oviducts, which are apparent on dissection, but the Rev. Fr. Dreckmann appears to have been the first to notice and record the remarkable *simultaneous twin parturition* of this species of scorpion. The subject is one of the greatest interest, not only for the naturalist, but to the physiologist, and it is to be hoped that other members of this Society will contribute the result of their observations.

Mr. Lionel de Nicéville, F. E. S., has obtained from Mr. J. Wood-Mason, the Superintendent of the Indian Museum, Calcutta, the following interesting note on the simultaneous viviparous twin parturition of the Black Rock Scorpion :—

“Nothing, so far as I know or can discover, having been placed on record about the parturition of scorpions, I cannot say whether the twin births you have observed are usual or unusual. Such a point indeed is only to be settled by a multitude of observations of the same kind as that which you are about to record; but whether they are the rule or only occasionally happen, would be readily explained by the bilateral symmetry of the genital organs, by the development of the embryos in pairs, and by the symmetrical action of the muscular mechanism of parturition. That scorpions bring forth living young, and do not lay eggs, has been, I need hardly say, long (more than fifty years) known to science.”

### CORRESPONDENCE.

#### THE PROTECTION OF GAME.

THE President of the Ahmedabad Municipality having asked the Bombay Natural History Society for an opinion as to what game birds and animals should be protected in the neighbourhood of Ahmedabad, under Act 20 of 1887, the following answer has been sent in reply :—

From the Honorary Secretary, Natural History Society, Bombay ;  
To the President, Ahmedabad Municipality.

Bombay, 28th April, 1888.

DEAR SIR,— I duly received your letter No. 248 of 3rd inst., and have laid the same before the Committee of the Society, who have expressed their opinion that any Act for the local protection of game, *in order to be effective, should be as simple as possible.*

They are of opinion that game in the neighbourhood of Ahmedabad would be sufficiently protected if it were made illegal for any one (not being a cultivator) to be in possession of game, living or dead, between the 15th of June and the 15th of October (unless, of course, the possessor could prove that it came into his keeping prior to the 15th June).

An exception should be made in favour of cultivators of the soil, who might be allowed to kill such animals and birds as are destructive to crops; but game so destroyed should not be offered for sale.

I attach a list of the game birds and animals which, in the opinion of the Committee, should be protected. You will observe that the Grey Partridge and Grouse have been included in this list, although they both breed much earlier.

The above is the opinion of the Committee of the Society as regards the preservation of *game*, but I am requested to add that, as naturalists, the Committee would be glad to see *all birds* protected during the rains (*i. e.*, 15th June to 15th October).—Yours, &c.,

H. M. PHIPSON,

Honorary Secretary.